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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/790,591	03/01/2004	Hamilton Wong	50099-00002	9193

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EXAMINER

KRUER, KEVIN R

ART UNIT	PAPER NUMBER
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1773

DATE MAILED: 07/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/790,591

Applicant(s)

WONG, HAMILTON

Examiner

Kevin R. Kruer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) 28-34 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 28-34 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on October 24, 2005.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-9, 11-22, and 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonczy et al (US 5,143,770) in view of McGivern et al (US 6,521,077) and JP 2003-260371 (herein referred to as Sanyo).

Gonczy teaches a multilayer insulation blanket (abstract). The blanket comprises successive layers of thermally reflective materials and spacer materials (col 6, lines 4+). The thermally reflective material is a polyester, polyamide, polyimide or polyolefin film wherein both surfaces of said film are metallized with aluminum, gold, or silver (col 6, lines 4+). Said thermally reflective materials are herein understood to read on the claimed "outer sheet of thermally insulative plastic material" and "at least one inner sheet of thermally insulative plastic material." The spacer materials are spunbonded

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polyester. Said layers are herein understood to be "coextensive with one another (see Fig 4)."

Gonczy teaches the blanket is used to insulate cryogenic structures but does not teach the blanket may be utilized as a insulating blanket providing thermal protection for a spacecraft. However, McGivern teaches that blankets that are useful as insulating blankets for cryogenic structures are also useful as insulating blankets for spacecraft (col 3, "Brief Summary of the Invention"). Thus, it would have been obvious to one of ordinary skill in the art to attach the blanket taught in Gonczy to a portion of a spacecraft in order to provide said spacecraft with thermal protection. The motivation for doing so would have been that McGivern teaches insulating blankets for use with cryogenic structures also have use as insulating blankets for spacecraft.

Gonczy does not teach a coating of anti-contaminant material should be placed over the outer sheet of thermally reflective material. However, Sanyo teaches a photocatalyst material for substrates comprising a quartz (silica) layer formed in zone 2 (herein relied upon to read on the claimed high emittance layer), an indium tin oxide layer in zone III (herein relied upon to read on the claimed electrically conductive layer), and a photocatalytic titanium oxide layer is formed in zone IV (herein relied upon to read on the claimed "anti-contamination layer")-see abstract. The titanium oxide layer has a thickness of 100-500nm and is herein understood to be taught with sufficient specificity to read on the claimed thickness of claim 1. Said photocatalyst is effective for inducing the breakdown of organic residues on said outer surface of a material in the presence of solar radiation and exhibits good adhesion and durability (abstract). Thus, it would have

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been obvious to apply the layers taught in Sanyo to the outwardly facing metallized layer of the insulative blanket taught in Gonczy. The motivation for doing so would have been to induce the breakdown of organic residues on said outer surface of the thermally insulative plastic material in the presence of solar radiation.

4. Claims 10 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gonczy et al (US 5,143,770) in view of McGivern et al (US 6,521,077) and JP 2003-260371 (herein referred to as Sanyo), as applied to claims above, and further in view of Herd et al (US 5,651,251).

Gonczy in view of Murata is relied upon as above, but does not teach the spacers may comprise the claimed mesh. However, Herd teaches thermal shields typically comprise metallized composite films intervened with glass or nylon mesh spacer layers, as is known in the art (col 4, lines 12+). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to utilize glass or nylon mesh as the spacer layers of the laminate taught in Gonczy. The motivation for doing so would have been that said meshes are known in the art to be functionally equivalent to the polyester spunbonded fibers taught in Gonczy.

Response to Arguments

Applicant's arguments filed May 5, 2006 have been fully considered but they are not persuasive.

Applicant argues Gonczy does not disclose the use of the multilayer insulation blanket to provide thermal protection for a portion of a spacecraft. The examiner agrees and has applied McGivern to overcome said deficiency.

Applicant further argues Gonczy does not teach the use of a photocatalytic coating. The examiner agrees and has applied the teaching of Sanyo to overcome said deficiency. The examiner maintains the position that one of ordinary skill in the art would have been motivated to apply said photocatalytic coating to the insulating blanket taught by Gonczy in view of McGivern to provide the blanket with an anti-contamination coating.

Applicant's arguments with regards to Murata are moot in view of the new grounds of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer
Patent Examiner-Art Unit 1773